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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SCHWEGMAN, LUNDBERG & WOESSNER, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

CALLAHAN, PAUL E

ART UNIT	PAPER NUMBER
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2437

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,762	Applicant(s) WAJS ET AL.	
	Examiner PAUL CALLAHAN	Art Unit 2437	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6-13-06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-12 are pending and have been examined.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 11 and 12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As for claim 12, the preamble of the claim indicates that it is directed towards a plurality of data structures embodied in an electromagnetic data signal. As such, the claim is directed towards functional descriptive material but is non-statutory because

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without being embodied in a computer-readable medium, the data structures cannot be considered as a computer-component since their functionality cannot be employed by a computer, i.e., they cannot cause a functional change in a processor in order to effect a useful, or tangible result. From MPEP 2106.01 Computer-Related Nonstatutory Subject Matter: I. FUNCTIONAL DESCRIPTIVE MATERIAL: "DATA STRUCTURES "

REPRESENTING DESCRIPTIVE MATERIAL PER SE OR COMPUTER PROGRAMS

REPRESENTING COMPUTER LISTINGS PER SE: *Data structures not claimed as*

embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.

See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (*claim to a data structure per se held nonstatutory*). *Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.*

As per claim 11, the preamble of the claim indicates that it is directed towards a computer program that instructs a computer to carry out the method of claim 1.

However, the claim does not positively recite any limitation that specifies the software as being embodied in a computer readable medium. Therefore the claim sets forth only

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functional descriptive language and is non-statutory since this does not fall into one of the classes of invention eligible for the grant of a US patent. Unless embodied in a computer-readable medium the software in and of itself cannot be considered as a computer component, and hence cannot effect a change of state of a processor to produce a useful or tangible result. From 2106.01: Computer-Related Nonstatutory Subject Matter: *Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” In this context, “functional descriptive material” consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of “data structure” is “a physical or logical relationship among data elements, designed to support specific data manipulation functions.” The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) “Nonfunctional descriptive material” includes but is not limited to music, literary works, and a compilation or mere arrangement of data. Both types of “descriptive material” are nonstatutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases.*

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 11 is rejected under 35 U.S.C. 112, first paragraph because the claim is an impermissible single means claim and therefore is of undue breadth. As written, the claim scope encompasses any conceivable computer-program that carries out the method of claim 1. Therefore, instead of being limited to those embodiments of the invention set forth in the Applicant's disclosure, the claim scope includes all computer programs that can direct a processor to undertake the method steps of claim 1. From MPEP 2164.08(a): Single Means Claim: *A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.*

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3-4 and 7-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Burazerovic et al., International Application Number PCT/IB2003/005965, Publication number WO 2004/056112 A1, International Pub. Date: 7-1-04, (Submitted with the Applicant's IDS). Burazerovic teaches:

As per claim 1, a method of partially scrambling a data stream including transport stream packets (abstract), each transport stream packet having a header and a payload (page 4 lines 19-20), wherein a sequence of transport stream packets has payloads carrying encoded data elements (page 4 lines 17-21), arranged in units (page 4 lines 17-21), including: selecting transport stream packets forming a sub-sequence of the sequence (page 5 lines 30-36), and scrambling the payloads of each transport stream packet in the sub-sequence (page 5 lines 30-36, col. 6 lines 19-21), monitoring the payloads of at least some of the transport stream packets in the sequence for the presence of data indicating a boundary between two subsequent units (page 5 lines 25-28, page 6 lines 5-15, page 8 lines 20-25), and, for selected units, including at least one

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of the transport stream packets carrying data forming part of the selected unit in the sub-sequence (page 5 lines 25-28, page 6 lines 5-15, page 8 lines 20-25).

As per claim 3, a method according to claim 1, wherein the selected units include units containing at least part of an encoded representation of a picture (page 8 lines 20-25).

As per claim 4, a method according to claim 1, wherein each unit contains an indication of the type of data to follow and a part containing that data (page 5 lines 25-36), wherein the type of each unit in the monitored payloads is determined from the indication and the unit is included among the selected units if the type corresponds to at least one specific type (page 5 lines 25-36).

As per claim 7, a method according to claim 4, wherein the encoded data elements are decodable using a predictive decoding technique and the specific types include a type of data element allowing a prediction to be derived from only the decoded data belonging to the data element (page 3 lines 5-17).

As per claim 8, a method according to claim 1, wherein up to a maximum number of transport stream packets following a first transport stream packet carrying data

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forming part of a selected unit are included in the sub-sequence (col. 2 lines 20-25, page 4 lines 9-16, page 5 lines 25-28).

As for claims 9 and 10, these claims are directed towards the system (apparatus) carrying out the method of claims 1 and 8. Claims 9 and 10 recite substantially the same limitations as claims 1 and 8 and are rejected on the same basis as those claims.

As for claim 11, the claim is directed towards a computer-program that causes a computer to carry out the method steps of claim 1. Claim 11 recites substantially the same limitations as claim 1 and is rejected on the same basis as that claim.

As for claim 12, the claim is directed towards the electromagnetic data signal produced by the method of claim 1. Claim 12 recites substantially the same limitations as claim 1 and is rejected on the same basis as that claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burazerovic et al., and Unger et al., International Application Number PCT/US02/40050, Publication Number WO 03/061289 A1, International Pub. Date: 7-24-03, (Submitted with the Applicant's IDS).

As per claim 2, Burazerovic teaches a method according to claim 1, but not wherein the data stream is a multiplex of elementary streams, the method including identifying at least one elementary stream including the sequence of transport stream packets and monitoring only payloads of packets in the identified elementary stream(s). However Unger et al. does teach these features (page 9 lines 5-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate these features into the system of Burazerovic. It would have been obvious to do so since this would allow the invention to be used on only one signal stream amongst a plurality of multiplexed signal streams and hence exert greater control over content scrambling.

As per claim 5, Burazerovic teaches a method according to claim 4, but not wherein units of types other than the specific type(s) are randomly included among the selected units. However, Unger et al. does teach this feature (page 25 lines 1-3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate this feature into the system of Burazerovic. It would have been obvious to do so since this would make it more difficult for an unauthorized

party to decode and utilize the content.

As per claim 6, Burazerovic teaches a method according to claim 5, wherein the types are defined by the encoding technique with which the encoded data elements have been formed (page 6 lines 1-14).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following US Patent document teaches a system of signal encoding pertinent to the Applicant's disclosure:

Kubota US 7,023,992

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Emmanuel Moise, can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Paul Callahan/
Examiner, Art Unit 2437

/Emmanuel L. Moise/
Supervisory Patent Examiner, Art Unit 2437